

Amendment and Response

Applicant: Steiner et al.

Serial No.: 10/519,215

Filed: September 19, 2005

Docket No.: 431.122.101/FIN399PCT/US

Title: ELECTRONIC COMPONENT WITH A HOUSING PACKAGE

REMARKS

The following remarks are made in response to the Non-Final Office Action mailed March 29, 2007. Claims 32-44, 46-48, 50, 52 and 55-60 have been withdrawn from consideration. With this Response, claims 31 and 45 have been amended. Claims 31, 45, 49, 51, 53 and 54 remain pending in the application and are presented for reconsideration and allowance.

Oath/Declaration

Section 2 of the Office Action stated the Declaration was defected due to reciting the filing date as the U.S. National Stage entry date. A replacement declaration will be submitted once it has been execution by the inventors.

Drawings

A replacement drawing sheet is included to correct an informal error in Figure 3. The cavity 36 was mistakenly identified by reference number 26.

Specification

Section 3 of the Office Action objected to the specification due to an informal error. This error has been corrected, as well as other informal errors identified by Applicants. The objection to the specification is thus believed to be overcome.

Claim Rejections under 35 U.S.C. § 102

Claims 31, 45, 49 and 51 were rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Murakami (5,874,780). Applicants respectfully traverse these rejections.

Claims 31 and 45 have been amended to more clearly define the recited item. Among other things, independent claims 31 and 45 each recite “pointed-conical external contacts” that are “surrounded by one of the layers of plastic.”

As noted in MPEP 2143, the cited reference must disclose each recited claim element to anticipate a claim. Regarding the pointed-conical contact element, the Office Action cites

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reference numbers 106,107 shown in Figures 2A and 2B of Murakami. The present specification clearly defines *pointed-conical* as “meaning a body which has a base area and a height, its outer contour tapering with increasing height from the base area.” Specification at p. 2, ll. 20-22. In contrast, the bump electrode 107 disclosed in Murakami fails to disclose such a structure.

Moreover, Murakami fails to disclose or suggest such a pointed-conical contact that is surrounded by a plastic layer. To the extent that a portion of the bump electrode 107 of Murakami includes a pointed tail 106, the bump electrode 107 is not surrounded by a plastic layer, as shown in Figures 2A and 2B thereof. When the bump electrode 107 is surrounded by the resin material 109, as shown in Figure 2C, there clearly is no pointed portion.

Still further, Murakami appears to *teach away* from a pointed-conical contact surrounded by plastic. teaches a method of connecting a semiconductor device to a substrate in which a soft, 99.99% gold contact is deformed by pressing to produce a distal end which is enlarged from a pointed shape to a plane. *See, e.g.*, Murakami at Abstract. In this manner, an interlocking between the conductor track and the U-shaped contact and an enlarged contact area is produced. Rather than a pointed contact, Murakami clearly teaches a contact ending in a *plane*, rather than a *point*. It further appears that, if the bump electrode 107 disclosed in Murakami ended in a point, it would not perform its stated function.

Claim 45 has further been amended to make it even more clear that the recited panel includes a number of component positions, with each component position having at least one semiconductor chip with pointed-conical external contacts. The Office Action does not appear to identify a disclosure in Murakami of a panel having multiple component positions.

For at least these reasons, Applicants believe Murakami fails to disclose each element recited in claims 31 and 45. Claims 31 and 45, as well as the remaining claims dependent thereon, are thus believed to be in condition for allowance.

Claim Rejections under 35 U.S.C. § 103

Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami in view of Bauer et al. (6,455,442).

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Claim 53 depends from claim 45, and is therefore allowable for at least the same reasons set forth above.

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CONCLUSION

In view of the above, Applicants respectfully submit that all of the pending claims are in form for allowance. Applicants therefore respectfully request reconsideration and withdrawal of the rejections and allowance of the claims.

No fees are believed to be required under 37 C.F.R. 1.16(b)(c). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Mark L. Gleason at Telephone No. (612) 767-2503, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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